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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,119

02/17/2004

Oliver Horn

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25215

7590

08/25/2006

DOBRUSIN & THENNISCH PC  
29 W LAWRENCE ST  
SUITE 210  
PONTIAC, MI 48326

EXAMINER

FORD, JOHN K

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/780,119

Applicant(s)

HORN ET AL.

Examiner

John K. Ford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/26/06.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 9-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 8 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/26/06 (2 pages)

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Applicant's response of June 26, 2006 has been studied carefully.

The interview of June 20, 2006

Applicant's understanding is correct that the examiner agreed to consider any arguments traversing the election requirement, even though applicant in the November 10, 2005 elected the species of Figure 1 without traverse, though counsel Voci. In addition, should the examiner maintain the election requirement, the examiner will rejoin and allow all dependent claims to the non-elected species if they depend from an allowable generic claim.

Traverse of the Election of Species Requirement

Applicant re-affirms the election of Figure 1, this time with traverse (on November 10, 2005, the same election, without traverse), and states that claims 1 and 13 are generic and that claims 2, 7 and 8 are readable on the elected species (of Figure 1). This is a repeat of what applicant stated in the November 10, 2005 response. It is noted however in the most recent response that applicant has voluntarily withdrawn claim 13 (see response of June 26, 2006, page 7, "Rejection under 35 U.S.C. 112"). Thus it appears that applicant has identified claims 1, 2, 7, 8 and 14 as readable on the elected species of Figure 1 and the claim labels in the latest amendment bear out the examiner's understanding.

Applicant has argued that there is no serious burden to the examiner in searching out all of the details of the non-elected species. This is simply out of touch with the time constraints placed on this examiner by the PTO presently. To even begin to explain to applicant how many different databases the PTO has added to the basic database of US patents (now over 7 million) with tens of millions of non-US patents, with no time compensation in search time, takes time away from the examiner that he can not afford to expend. Applicant is assured that if the examiner happens across a reference that discloses some material feature of a non-elected species, he will endeavor to cite it. The argument is unconvincing because it is not based on fact.

#### Rejoinder of Withdrawn Claims Directed to the Non-elected species

As stated above, the examiner will rejoin and allow all dependent claims to the non-elected species if they depend from an allowable generic claim. Counsel should be amending those non-elected claims during prosecution so that they are consistent with any changes made to the examined claims from which they depend. Applicant will be given an opportunity to amend and/or cancel the non-elected claims once allowable subject matter has been determined.

#### Related Applications

Applicant has identified a few.

Rejection under 35 USC 112

Moot in light of applicant's voluntary withdrawal of claim 13.

Rejections under 35 USC 102(b) and 103(a)

Further discussion of the original rejections deemed to be moot in light of the new and previously unclaimed limitations added to claims 1 and 2. It is noted however that applicant has failed compare the currently claims to the disclosures found in the prior art nor to discuss where the new current limitations are supported in the original disclosure.

New Rejections

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, 7, 8 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The original disclosure does not provide support for the new limitation in claim 1 that the generator selectively supplies electricity to the compressor during an operating mode of the vehicle and that the battery selectively supplies electricity to the compressor when the vehicle is in a stationary mode.

In paragraph 13 of the original specification it simply states that the electrical energy from the generator is configured in a way that “makes available the electrical energy [of the generator]” to the electrically driven compressor. It does not say that it does this selectively in lieu of using the battery as claim 1 is currently claiming. Moreover the only mention of a battery in the entire disclosure is in paragraph 22, lines 14-16 and there is no disclosure there that the battery is selectively used in lieu of the generator as claim 1 is currently claiming. The original specification is silent as to which operating mode of the vehicle the battery is used to power the electrically driven compressor. In fact, in paragraph 28 of the original specification it states that during the stationary mode of the vehicle the compressor is not driven at all, “and is at most driven with a low electrical power”. The original disclosure is silent as to this low electrical power source. One could speculate this could be a battery (as counsel does in amending claim 1) or idling the engine or connecting the system to some source of “shore power”, typically the way recreational vehicle air conditioners are plugged into the campsite electrical system during stopovers. Speculation is not disclosure. To have original support, the new claims must be supported by “the necessary and only

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reasonable construction to be given to the disclosure”, see Wagoner v. Barger 175 USPQ 85 (CCPA 1972).

Likewise claim 2, echoing what is claimed in claim 1, claims that the electric pump is selectively driven by the generator when the motor vehicle is in an operation mode and selectively by the battery when the motor vehicle is in a stationary mode. This has even less support in the original specification than the “new matter” added to claim 1. All that is stated with regard to the pump is found in paragraph 27, which states: “The pump 34 is preferably electrically driven and can draw, for example, the electrical energy necessary for it from a battery (not illustrated).” Nothing is disclosed regarding the selective application of electricity from the generator and this battery as a function of vehicle mode. In fact it would appear to be more likely that it is always connected to the battery based on the words of the original disclosure.

Similarly, claim 14 has virtually no support in the original specification. The battery mentioned in paragraph 27 and in paragraph 22 line 16 have no disclosed relationship with one another.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rafalovich (6,059,016) or Khelifa et al (6,260,376).

In Figure 32, Rafalovich discloses an electrically driven compressor 488 (col. 32, line 42), condenser 490, expansion device 492, a thermal storage system 512 having a latent heat holdover 391 (phase change material) and a coolant circuit formed by heat exchanger 166, air heat exchangers 514 and 516, closed heat transfer loop 156 and a pump 150. While element 492 is referred to as an expansion device and not specifically an expansion valve, the terms are often used synonymously. To that extent Rafalovich is deemed to be a proper reference under 35 USC 102(b). Nevertheless, if necessary, Rafalovich discloses an expansion valve 136 in the embodiment of Figure 5 and it would have been obvious to have used an expansion valve in the Figure 32 embodiment to perform the expansion of the refrigerant. Many such expansion valves offer the advantage of improved control over the refrigerant expansion.



The detailed description of Figures 2 and 3 of Khelifa appears to show all of the claimed subject matter and the reference is incorporated here by reference by way of explanation. Given that it shares an inventor with the inventive entity of the current application, no further explanation by this examiner is deemed necessary. Applicant should also note col. 3, lines 28-43, incorporate here by reference.

Regarding functional recitations of intended modes of operation in an apparatus claim, it is submitted that these are not given weight in giving the claim its broadest reasonable interpretation. See MPEP 2114, incorporated here by reference. An apparatus is defined by what the apparatus is, not what apparatus does.

Claims 1, 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rafalovich (6,059,016) or Khelifa et al (6,260,376) as applied to claims 1, 2 and 14 above, and further in view of Hara 2001/0015070.

The prior art to Rafalovich (6,059,016) or Khelifa et al (6,260,376) lacks a teaching of selectively operating the air conditioner compressor by the battery when the vehicle is in a stationary mode and selectively operating the air conditioner compressor by the engine (thorough the engine driven generator) when the vehicle is in an operating mode. This deficiency in the prior art is clearly overcome by the teaching of Hara that teaches driving the compressor using electricity from a battery when the combustion engine is under an idling stop and driving the compressor only with the

combustion engine after the expiration of a second given time from restarting the combustion engine. To have implemented this type of control scheme into the prior art to Rafalovich (6,059,016) or Khelifa et al (6,260,376), to advantageously improve occupant comfort and conserve battery energy.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rafalovich et al or Khelifa et al as applied to claims 1 and 2 above, and further in view of Kang (WO 01/40005).

In column 35, lines 13-16, Rafalovich discloses that the embodiment of Figure 32 (among others) can be used in an electric vehicle or a hybrid electric vehicle and this also appears to be true of Khelifa. Rafalovich nor Khelifa do not disclose the conventional details of such vehicles such as an engine driven generator. On page 8, lines 9-17, Kang discloses that electrically powered air conditioning systems using and electrically powered compressor (such as disclosed by Rafalovich and Khelifa) can be powered by an engine driven generator 17 that is directly connected to and driven by a crankshaft of an engine (not shown) of the vehicle.

To have driven the electrically driven compressor 488 of Rafalovich or the electrically driven compressor 19 of Khelifa, as disclosed in claim 7 of Khelifa, by an engine driven generator 17 that is directly connected to and driven by a crankshaft of an engine (not shown) of the vehicle, in a hybrid electric vehicle installation (as


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contemplated in column 35, lines 13-16 of Rafalovich) would have been obvious to one of ordinary skill in the art since this appears to be conventional and is clearly taught by Kang. Such a modification would advantageously permit optimal use of battery and engine resources in a hybrid vehicle.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to John K. Ford at telephone number 571-272-4911.



**John K. Ford**  
**Primary Examiner**